

### Abstract

The positive active material for a secondary battery of the present invention is  $\beta$ -FeOOH containing at least one element selected from the group consisting of B, P, S, Li, 5 Na, K, Mg, Al, Ca, Sc, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, Zr, Pb and Sn which shows a diffraction peak from the (110) plane having a half width  $\gamma$  satisfying  $0.3^\circ < \gamma (2\theta)$  when subjected to the X-ray diffractometry with the CuK $\alpha$  ray. A non-aqueous electrolyte secondary battery comprising as a 10 positive active material such low-crystalline  $\beta$ -FeOOH exhibits an excellent cycle life performance as compared with a non-aqueous electrolyte secondary battery comprising a high-crystalline  $\beta$ -FeOOH as a positive active material.